

# SAFETY DATA SHEET

## 1. Chemical Product and Company Identification

Product Name : L-Butyl Lactate  
Other Name : Butyl 2-Hydroxypropanoate  
Manufacturer : Musashino Chemical (China) Co., Ltd.  
Supplier : Musashino Chemical Laboratory, Ltd.  
Address : Tekko Bldg., 8-2, Marunouchi 1-Chome,  
Chiyoda-Ku, Tokyo 100-0005  
TEL : +81-3-6810-0242  
FAX : +81-3-6810-0148

## 2. Hazards identification :

Flammable Liquids, Category 4  
Specific Target Organ Toxicity (Single Exposure), Category 3  
Hazardous to the Aquatic Environment, Category 2  
Hazard Label :



Signal Word : Warning

Hazard Statement

Flammable liquid and vapor  
May cause respiratory irritation  
May cause drowsiness or dizziness  
Toxic to aquatic life

Precautionary Statement

Safety measures

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.

Emergency measures

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

IN CASE OF FIRE :

Use suitable extinguishing method for extinction.

Storage

Store in a well-ventilated place. Keep container tightly closed.  
Keep cool.

Store locked up.

Disposal

Dispose of contents/container in accordance with local/national regulations.

Other Hazard

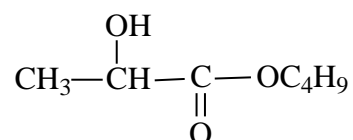
No information available.

### 3. Composition/Information on Ingredients

Chemical Name : Butyl-(S)-2-Hydroxypropanoate

Composition : L-Butyl Lactate  $\geq 98.0\%$   
1-Butanol  $\leq 0.2\%$

Formula :



MITI No. : (2)-1372

CAS No. : 34451-19-9

EINECS : 252-036-3

TSCA : On Inventory

Hazardous Component : Butyl Lactate

### 4. First Aid Measures

SKIN CONTACT : Remove/Take off immediately all contaminated clothing. Rinse skin with water and soap. If skin irritation or rash occurs: Get medical advice/attention.

EYE CONTACT : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call doctor/physician.

INHALATION : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call doctor/physician if you feel unwell.

INGESTION : Rinse mouth. Never give anything through mouth to an unconscious person. Call a doctor/physician if you feel unwell.

### 5. Fire Fighting Measures

Suitable extinguishing media

: Such as dry chemicals, foam

Special hazards arising from the product

: Flammable liquid burning may produce irritant gas/fume: carbon monoxide, carbon dioxide.

Special fire-fighting methods

: Cut off the combustion source and use the fire extinguishing agent to extinguish. In addition, cool tanks and building by water spray for reduction of fire spread. Fire-fighting should be done from the windward side.

Protection for fire-fighters

: Fire fighters should wear appropriate breathing apparatus and protective equipment.

## 6. Accidental Release Measures

Personal precautions

: Wear personal protective equipment. Do not breathe vapors, dust/fume/gas/mists/spray. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions

: It is thought that it is biodegradable and low fish toxicity. However, be careful about the discharge to the river..

Method and materials for contaminant and cleaning up

: For small spill, absorb spills with inert material, then place them into container.

For large spill, flush spills into container after leading to suitable retaining areas stopping the fluid by sand and the like.

Clean up the leaked place with large quantity of water.

Disposal must be in accordance with applicable regulation.

## 7. Handling and Storage

Handling

: Handle in accordance with good industrial hygiene and safety practice. Use this material with adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Take precautionary measures against static discharge.

Storage

: Store in cool, dry and well-ventilated place. Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. Store away from incompatible materials.

## 8. Exposure Controls/Personal Protection

Exposure limits : ACGIH TWA 5ppm (25mg/m<sup>2</sup>)

Equipment measures : Provide local exhaust or process enclosure ventilation system. Setup safety shower, eye washer and hand washer. And display those positions clearly.

Personal protective equipment

Respiratory protection : Wear gas mask or self-contained breathing apparatus in case of inadequate ventilation.

Hand protection : Wear protective gloves.

Eye protection : If the eyes may potentially come in contact with the product, then chemical safety goggles are necessary.

Skin and body protection : Wear appropriate protective working clothing and apron.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

## 9. Physical and Chemical Properties

Appearance : Transparent, clear, liquid having a characteristic odor.

pH : No data

Boiling Point : 187°C (101.3kPa)

Melting Point : -43°C

Decomposition Point : No data

Flash Point : 91°C (Cleveland open test)

Ignition Point : 382°C

Explosion limits : Upper 14.0vol% Lower 1.4vol%

Vapor Pressure : 0.43 hPa (20°C) 0.91 hPa (30°C)

Vapor Density : 5.0

Evaporation Rate : 0.03 (Butyl Acetate=1)

Heat of combustion : 6,563cal/g

Specific Gravity ( $d_{20}^{20}$ ) : 0.970~0.990

Solubility : Slightly soluble in water. (3.3% in water)

## 10. Stability and Reactivity

Stability : Stable under normal conditions of handling, storage use.

Possibility of hazardous reactions : No information available.

Conditions to avoid : Flames, strong heating and other sources of ignition, incompatible materials.

Incompatible materials : Strong acids, Strong bases.

Hazardous decomposition Products : Oxides of carbon

**11. Toxicological Information**

Exposure routes	: Inhalation, skin, ingestion, eye.
Symptom	: Not available.
Acute toxicity	: LD <sub>50</sub> >5,000mg/kg (Rat, Oral) LD <sub>50</sub> >1,200mg/kg (Rat, Intravenous) LD <sub>50</sub> >600mg/kg (Mouse, Intravenous) LC <sub>50</sub> >5.70g/m <sup>3</sup> (Rat, No –fatal cases) TCL <sub>0</sub> 4 ppm (Human) LDL <sub>0</sub> 200mg/kg (Rat, Peritoneum)
Local effect	: No data
Mutagenicity	: Negative, not a bacterial mutagen by the Ames test.
Irritation	: 500mg/24hr mod. (Rabbit skin)

**12. Ecological Information**

COD	: 0.31g/g (KMnO <sub>4</sub> )
BOD	: 1.08g/g

**13. Disposal Information**

Waste disposal methods	: Incinerate in suitable combustion chamber. Dispose of waste and residues in accordance with local authority requirements.
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**14. Transport information**

No information

**15. Regulatory Information**

Applicable regulations (Japan)

1. Fire Service Act.  
Category IV Inflammable liquids, ClassIII petroleums, Non-water soluble liquid.
2. Industrial Safety and Health Act  
Article 57-2 (Notifiable substances)  
Industrial Safety and Health Law Enforcement Ordinance, Article 18-2 (Dangerous or Harmful Substances Subject to Be Notified their Names)  
Attached Table9  
Hazardous Substances to be notified in terms of Whose Names (related Article 18-2)

**16. Other Information**

References

- 1) The Sigma-Aldrich Library of Chemical Safety Data

Edition II ; Robert E. Lenga

- 2) "The Handbook of Prevention for Dangerous Substances Accidents and Emergencies"  
KOUBEKAINAN BOUSHIKENKYUUKAI published by SEIZANDO  
(Japanese)
- 3) "The Guide to Prevention of Chemical Accidents I "  
Japan Chemicals Association published by MARUZEN (Japanese)
- 4) Documentation of the Threshold Limit Values and Biological Exposure Indices  
Sixth Edition; ACGIH
- 5) Dangerous Properties of Industrial Materials Sixth Edition; N. Irving Sax
- 6) Reports of Authorized Public Laboratory (Japanese)
- 7) Unpublished data (for Company use : Japanese)

Disclaimer :

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